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10/606,439	06/26/2003	Subodh K. Raniwala	0899-0017	2930

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EXAMINER

MADSEN, ROBERT A

ART UNIT	PAPER NUMBER
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1761

DATE MAILED: 10/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/606,439

Applicant(s)

RANIWALA, SUBODH K.

Examiner

Robert Madsen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/26/2003.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 15,17,24,25,27-31,38,39,41-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Mussi et al. (US 5358872).

3. Mussi et al. teach a cap with a hole in the top (i.e. items 20/23 of Figure 4), a PTFE membrane secured to the hole (item 22 of Figure 4) with the hole covered by an air tight seal utilizing a pressure-sensitive adhesive above the hole that includes acrylic adhesives, which are semi-transparent, actinic and UV radiation curable and dryable (seal includes item 32 of Figure 4). Furthermore, because the cap is secured to the neck of the container, the container includes a hole through the headspace (i.e. the neck of the container) with the membrane and air tight seal secured to the hole of the container (Column 2, lines 18-46, Column 5, lines 25-61).

4. Claims 15,17,18-22,30-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Jones (US 5522155).

5. Jones teaches a cap (item 90 of Figure 3) with a hole with a PTFE membranes, or a non-woven polyolefin (e.g. includes polypropylene) membrane, of 0.1-3 micron pore size (item 93 of Figure 13) covered by an airtight seal (item 91 of Figure 13). Furthermore, because the cap is secured to the neck of the container, the container

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includes a hole through the headspace (i.e. the neck of the container) with the membrane and air tight seal secured to the hole of the container (Column 3, line 13 to Column 4, line 15, Column 5, lines 8-43, Figure 13).

6. Claim 44 is rejected under 35 U.S.C. 102(b) as being anticipated by Foth (US 5988448).

7. Foth teaches a cap for releasing the vacuum of a drink container wherein the cap has a hole on the side flange (item 30 in Figures) with a hydrophobic air/gas permeable membrane covering the hole, and the hole sealed by a cap (item 10 in Figure 2). See Column 3-4.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung (US 4174784).

10. Hartung teaches hot filling and capping a polymer container with cooking oil or cranberry juice, providing a closure with a hole covered by a hydrophobic air permeable membrane (i.e. polypropylene), filling the container with hot liquid, applying the closure, and cooling wherein the hole provides a means for equalizing the pressure of the container (Column 1, lines 15-55, Column 2, lines 22-52, Column 3, lines 18-50,

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Column 4, lines 2-16) , but Hartung are silent in teaching providing an air tight seal over the membrane covered hole. However, it is notoriously well known that cooking oil becomes rancid with prolonged exposure to air and fruit juices undergo non-enzymatic browning with prolonged exposure to air. Therefore, it would have been obvious to provide an air tight seal after the oil or juice had cooled and the pressure equalized, since prolonged exposure to air will degrade both oil and juice.

11. Claims 2,4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung (US 4174784) as applied to claims 1 and 3 above, further in view of Jones (US 5522155).

12. Hartung is silent in teaching PTFE or any particular pore size. Jones also teaches a cap for a container to release the vacuum of a container after cooling via hydrophobic/gas permeable membranes. Jones uses PTFE membranes or non-woven polyolefins (e.g. includes polypropylene) of 0.1-3 microns so that gas, or air, can pass through yet prevent bacteria from entering the container (Column 3, line 13 to Column 4, line 15, Column 5, lines 8-43). Therefore, it would have been obvious to modify Hartung and utilize PTFE membranes with 0.1-3 micron size pores since Jones teaches these membranes are hydrophobic/air permeable will assist to release the vacuum of a cooled container as well as offer the benefit of preventing bacteria from entering the container, which is important for mercantile products such as cooking oil and cranberry juice. One would have been substituting one hydrophobic/air permeable membrane for another for the same purpose: equalizing the pressure of a cooled container.

13. Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung (US 4174784) as applied to claims 1 and 3 above, further in view of Mussi et al. (US 5358872).

14. Regarding claim 8, Hartung is silent in teaching any particular size of hole in the cap for the gases to enter the container. Mussi et al. also teach a cap with a hole in the top utilizing a membrane to allow gases to pass into the container (Column 2, lines 18-46, Column 5, lines 25-61). Mussi et al. teach the gas exchange rate depends on the size of the hole and the size of the hole depends on the particular permeability of the membrane (Column 3, lines 26-30). Therefore to select any particular size hole for Hartung would have been obvious depending on the permeability of the membrane selected and the desired gas exchange rate.

15. Regarding claims 9-14, Hartung is silent in teaching a pressure adhesive, a semitransparent adhesive, actinic and UV radiation curable, or a dryable paint coating for the seal. Mussi et al. teach a cap with a hole in the top (i.e. items 20/23 of Figure 4), a hydrophobic air permeable membrane secured to the hole (item 22 of Figure 4) with an air tight seal utilizing a pressure-sensitive adhesive above the hole that includes acrylic adhesives, which are semi-transparent, actinic and UV radiation curable and dryable (the seal comprises item 32 of Figure 4, Column 2, lines 18-46, Column 5, lines 25-61). Therefore, it would have been obvious to include a pressure adhesive, a semitransparent adhesive, an actinic and UV radiation curable, and a dryable coating for the seal for the seal since Mussi et al. teaches an effective seal for a hydrophobic air

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permeable includes pressure-sensitive acrylic adhesives, which are semi-transparent, actinic and UV radiation curable and dryable. It would have been further obvious to include a paint coating since acrylics are found in paints.

16. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mussi et al. (US 5358872), as applied to claims 15, 17, 24, 25, 27-31, 38, 39, 41-43 above, further in view of Mattson (US 5901867).

17. Mussi et al. are silent in teaching including liner applied to the inside surface of the cap to secure the PTFE membrane. Mattson teaches securing a PTFE to the inside surface of a cap for the venting via a liner to provide a support backing that offers mechanical support and ease of handling the PTFE membrane (Column 1, lines 44-51, Column 4, lines 8-25). Therefore, it would have been obvious to modify Mussi et al. and provide a liner, or support backing, since Mattson teaches this would offer mechanical support and ease of handling the PTFE membrane.

18. Claims 23, 26, 37, 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mussi et al. (US 5358872), as applied to claims 15, 17, 24, 25, 27-31, 38, 39, 41-43 above.

19. Regarding claims 23 and 37, Mussi et al. are silent in teaching the particular hole size, but Mussi et al. teach the gas exchange rate depends on the size of the hole and the size of the hole depends on the particular permeability of the membrane (Column 3, lines 26-30). Therefore to select any particular size hole would have been obvious

depending on the permeability of the membrane selected and the desired gas exchange rate.

20. Regarding claims 26 and 40, Mussi et al. are silent in teaching the seal comprises a paint. However, it would have been obvious to include paint on the seal of Mussi et al. to serve as a means for labeling the contents since this would allow one to identify the contents of each container by looking at the cap.

21. Claims 45-50 is rejected under 35 U.S.C. 103(a) as being unpatentable over as Foth (US 5988448) applied claim 44 above, further in view of Jones (US 5522155).

22. Foth is silent in teaching expanded PTFE or polypropylene membranes with 0.3-1.5 micron pores, and a hole of 50-100 microns. Jones also teaches a cap for a container to release the vacuum of a container and teaches utilizing hydrophobic/gas permeable membranes. Jones uses PTFE membranes or non-woven polyolefins (e.g. includes polypropylene) of 0.1-3 microns so that gas, or air, can pass through yet prevent bacteria from entering the container (Column 3, line 13 to Column 4, line 15, Column 5, lines 8-43). Therefore, it would have been obvious to modify Foth and utilize PTFE membranes or non-woven polyolefins, such as polypropylene, with 0.1-3 micron size pores since Jones teaches these membranes are hydrophobic/air permeable and still prevent bacteria from entering the container.

23. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over as Foth (US 5988448) applied claim 44 above, further in view of Mussi et al. (US 5358872).



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24. Foth is silent in teaching any particular size of hole in the cap for the gases to enter the container. Mussi et al. also teach a cap with a hole in the top utilizing a membrane to allow gases to pass into the container (Column 2, lines 18-46, Column 5, lines 25-61). Mussi et al. teach the gas exchange rate depends on the size of the hole and the size of the hole depends on the particular permeability of the membrane (Column 3, lines 26-30). Therefore to select any particular size hole for Foth would have been obvious depending on the permeability of the membrane selected and the desired gas exchange rate.

25. Claims 44,45, 52-57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mussi et al. (US 5358872), in view of Bartur et al. (US 5853096).

26. Regarding claims 44,45,52,53,55-57, Mussi et al. teach a cap with a hole in the top (i.e. items 20/23 of Figure 4), a PTFE membrane secured to the hole (item 22 of Figure 4) with the hole covered by an air tight seal utilizing a pressure-sensitive acrylic based adhesives, which are semi-transparent, actinic and UV radiation curable and dryable (item 32 of Figure 4). Furthermore, because the cap is secured to the neck of the container, the container includes a hole through the headspace (i.e. the neck of the container) with the membrane and air tight seal secured to the hole of the container (Column 2, lines 18-46, Column 5, lines 25-61). Mussi et al. are silent in teaching the hole on the side of the skirt portion of the cap. Bartur et al. also teach caps with hydrophobic gas permeable membranes. Bartur et al. teach including the membranes on the side of a skirt portion of the cap (e.g. the Embodiment of Figure 3C, Column 3,

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line 55 to Column 4, line 8, Column 5, lines 35-42). Therefore, it would have been obvious to modify Mussi et al. and include holes on the side section since one would have substituting one hole location for another for the same purpose: container caps with hydrophobic gas permeable membranes.

27. Regarding claim 54, Mussi et al. are silent in teaching the seal comprises a paint. However, it would have been obvious to include paint on the seal of Mussi et al. to serve as a means for labeling the contents since this would allow one to identify the contents of each container by looking at the cap.

### ***Conclusion***

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

29. Rogers (US 6548134 B1), Lake (US 6196409 B1) teach containers with sidewalls having a hydrophobic air permeable membrane.

30. Amberg (US 3083861) and Kayal et al. (US 5622865) teach caps with hydrophobic air permeable membranes.

31. Giblin et al. (US 5460282) teach a seal on a venting lid.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Madsen whose telephone number is (571) 272-1402. The examiner can normally be reached on 8:00AM-4:30PM M-F.

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33. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

34. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert Madsen  
Examiner  
Art Unit 1761



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